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AGRICULTURAL EXTENSION DIVISION

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SAVE \$8,000,000

**SMUT DESTROYED MORE THAN
\$8,000,000 WORTH OF
MINNESOTA GRAINS
IN 1918**

PREVENT THIS LOSS BY

**Smut Treatment
for Grains**

UNIVERSITY OF MINNESOTA

DOCUMENTS
Plant Pathology

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poses of the coöperative agricultural extension work
provided for in the Act of Congress of May 8, 1914.

THINGS TO REMEMBER

1. Fan seed grain thoroly before treating to get rid of smut balls and smut masses.
2. Use formaldehyde of standard (37-40 per cent) strength.
3. Clean floors, bins, wagon boxes, sacks, drills, coverings or anything with which grain may come in contact after it has been treated. Clean any or all these by washing or soaking thoroly with some of the solution used for treating the grain.
4. Keep grain from freezing after it has been treated. Sow the day following treatment or spread out and shovel over every few hours until dry.
5. Avoid heating of grain by sowing it, or by drying the seed as quickly as possible after it has been treated. If drying can be done in sunshine it is faster and better.
6. If treated grain is sown before thoroly dry, set drill to sow from one-fifth to one-fourth more per acre than when dry grain is used.
7. Get smut-free seed if loose smut of barley or wheat has been troublesome. The treatment given herewith is not effective for loose smuts.
8. Treat this year if your grain was clean. The threshing machine may make the clean grain foul. Formaldehyde will make the foul grain clean.

TREAT, ENTREAT OTHERS TO TREAT!

9. Call upon the Farm Bureau Committeemen or the County Agricultural Agent for a demonstration in your neighborhood. The County Farm Bureau office is always at your service.

Grain Smuts Lose Dollars for You

Formaldehyde will Stop the Loss

Formaldehyde treatment of seed grain will prevent oat smut, bunt or stinking smut of wheat, covered smut of barley, and rye smut.

How to Use Formaldehyde

There are four methods about equally effective that may be used. Which one to use will depend on convenience and equipment on the farm.

The **dipping method** is that in which the grain is put into the prepared solution and soaked for a short time.

The **machine method** requires the purchase of a smut-treating machine.

The **spraying method** can be recommended at the present time only for oats.

The **sprinkling method** is the simplest and most common and may be used under the greatest variety of conditions. For that reason it is outlined herewith:

The sprinkling treatment. Pour one pint of standard formaldehyde (37% to 40%) into forty gallons of water and stir thoroly. Spread grain to be treated in a layer not more than four inches deep. Use a clean floor or wagon box. While one person turns the grain by shoveling a second person sprinkles it slowly, using an ordinary sprinkling can. The sprinkling should continue until all the seed is moist. Shovel the grain into a cone-shaped pile and cover with clean sacks, carpet, or a tarpaulin from four to six hours or over night. The forty gallons of solution should treat about fifty bushels of grain.

Note the precautions on the other side of this card.

It pays—Use a fanning mill on the seed grain before treating if you can. It helps!

For further information call on your County Agent or write to the Plant Disease Department, University Farm, St. Paul.